Water Conservation Ratemaking Disincentives

The Case for Decoupling Sales from Revenues

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Experience & Education

- An independent consultant employed by California Water Utilities.
- 32 years of experience with the State of California at the California Public Utilities Commission and the California Energy Commission, 26 years at the Manager Level.
- PUC experience included responsibility for energy efficiency programs.
- World Bank and USAID work advising cabinet level staff on energy regulation matters in China, Egypt, India, Mongolia, and Sri Lanka.
- AB economics, UC Berkeley; MA economics Cal State, Hayward.

California Water Conservation Policy

- One of the State's primary resource management strategies is water conservation (*the Department of Water Resources*).
- Water conservation will decrease water company revenues and profits. (*California Public Utilities Commission*).

What's Wrong with Current Water Utility Ratemaking?

- Current PUC ratemaking practices provides water utilities an incentive to increase sales. If sales are above projected levels, revenues increase.
- Conversely, if a water utility decreases sales, revenues and profits will decrease.
- One California water utility estimates that a 10% decrease sales will result in 36% reduction in earnings.
- Value of energy savings not included in cost evaluations of water conservation programs.

California Water Utilities Spend Far Less On Water Conservation than Energy Utilities Spend On Energy Efficiency Programs.

- Southern California Edison has an annual conservation program budget equal to about 3.2% of revenues.
- The two largest California Water utilities, Cal Water and Golden State Water have conservation programs equivalent to .5 to .75% of revenues.

The PUC resolved the conservation dilemma for energy utilities in the 1980's by decoupling revenues from sales

- For Electric Utilities: Electricity Revenue Adjustment Mechanism (ERAM) and subsequent decoupling mechanisms.

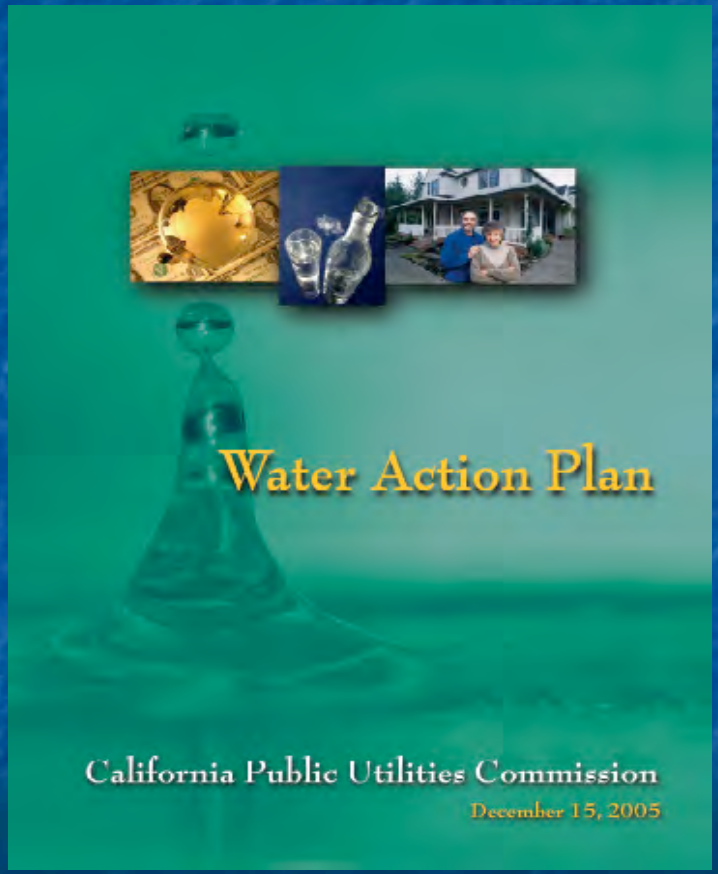
- For Gas Utilities: Sales Adjustment Mechanism (SAM).

Examples of Revenue Decoupling Mechanisms

- California Energy Utilities,
- Energy Utilities in other states: Washington, Main, New York, Oregon,
- Los Angeles Department of Water and Power – deals only with under collection due to conservation,
- California American Water Company – deals only with under/over collection due to inverted block rate structure.

The CPUC has recently endorsed the water revenue decoupling concept.

- "Because water utilities recover their costs through sales, there is a disincentive associated with DSM."
- "The Commission will consider de-coupling water utility sales from earning in order to eliminate the current disincentive associated with conservation."



Benefits of a Revenue Decoupling Mechanism for the Water Industry

(Revenue Adjustment Mechanism - RAM)

- Sets regulatory climate for water utilities to promote water conservation programs;
- Removes the incentive to promote sales;
- Aligns the state's water efficiency policy with state ratemaking;
- Aligns utility interests with the State's interest in water conservation;
- Minimizes the importance of sales forecasting in PUC general rate cases;
- Creates ratemaking stage for better price signals – such as increasing quantity rates;
- Removes the need for special revenue accounts if emergency conservation rates are implemented.

Arguments Against Revenue Decoupling Mechanisms

- Reduces risk, need to adjust rate of return
  - *This was not a Commission concern for energy utilities.*
  - *Any effect on risk will be captured in future cost of capital studies.*
- Utilities will not reduce costs
  - *The decoupling mechanism focuses on revenues, not costs*.
- Alternative is to estimate lost revenues
  - *Does not remove the incentive to increase sales.*
  - *High stakes in estimating conservation savings.*
  - *Rate case revenue forecasting still controversial.*
- Utilities should first implement inverted rates
  - *Utilities need decoupling due to uncertainties with rate recovery.*

How Does a Revenue Decoupling Mechanism Work?

Variations between recorded revenues and the utility's authorized revenue requirement are tracked for subsequent recovery from, or refunded to ratepayers.

Revenue Decoupling Accounting Example

	A	B	C	D	E	F	G	I
	Authorized Rate $/CCF	Expected Sales CCF	Authorized Revenue $	Actual Sales CCF	Measured Revenue $	Reported Revenue $	Balance Account $	WRAM Adjustment $/CCF
Year 1	0.83	100	83	95	78.85	83	4.15	0.000
Year 2	0.83	100	83	103	85.49	83	-2.49	0.042
Year 3	0.83	100	83	102	84.66	83	-1.66	-0.025
Year 4	0.85	105	89.25	105	89.25	89.25	0	-0.016
Year 5	0.85	105	89.25	NA	NA	89.25	NA	0.000

Revenue Decoupling Implementation Issues

- Other revenue adjustments such as supply balancing accounts.
  - Additional adjustments needed to assure customer and utility neutrality for revenues and expenses.
  - Solution is to change current PUC Policy that does not recognize changes in quantities of purchased water, purchased power and pump taxes.
- Adjustments usually tracked on monthly basis.
- Based on Sales or Revenues.
- Interest adjustments.

Recent Cal Water and DRA Settlement on RAM

- Approves a partial revenue decoupling mechanism:
  - Neutrality of expense recovery not completely resolved.
  - Company still has partial incentive to encourage growth.
- Cal Water will file for increasing quantity rates in collaboration with DRA.
- Parties do not agree on effect, if any, on the cost of capital.
- Implementation contingent on Commission approval.

Other California Water Utilities Interested in Decoupling

- Cal Am, pending application for RAM and increasing quantity rates.
- Golden State Water and Great Oaks Water
  - These utilities are also interested in expanding their water conservation programs.
- Golden State Water is working on an application to the PUC for a RAM in conjunction with a proposal for increasing quantity rates.
- Others

Longer Run Prognosis for California Water Utility Conservation Policy Based on Lessons learned from Energy Efficiency

- Phase one:
  - Commission adopts a revenue decoupling mechanism in the Cal Water Rate case, other water utilities will follow.
  - Commission adopts increasing quantity rates for water utilities with RAMs.
  - CPUC, Water Division Revises Rate Design Standard Practice, endorsing RAM, lower service charges, and increasing block rates.
  - Water utilities increase conservation budgets, programs and staff.
  - Water conservation savings estimates include value of water and energy savings.
  - Improvements in conservation program design, program implementation and measurement.
  - Least cost water planning including demand management and supply resources.
- Phase Two
  - Financial incentives: rewards for meeting goals, sharing savings with customers.

Additional Information on Revenue Decoupling.

Energy Decoupling:

California PUC D 93892:, D. 93887,D. 0405055, D 0407022.

David Moskovitz "Profits & Progress Through Least-Cost Planning, Electricity Regulatory Assistance Project. www.raponline.org.

Sheryl L. Carter, "Breaking the Consumption Habit, Ratemaking for Efficient Resource Decisions," The Electricity Journal, December 2001.

Marnay and Comnes, "Ratemaking for Conservation: the California ERAM Experience," Lawrence Berkeley Laboratory, May 1990, LB L-28019.

Wayne Shirley, "Barrier to Energy Efficiency," the Regulatory Assistance Project, July 2005, www.raponline.org.

Water Decoupling:

David Morse, "Water Conservation Ratemaking Treatment…", June 2005, "Rebuttal Testimony of David Morse," January 2006; Cal Water general rate case applications 05-08-006 through 05-08-013. (Pending PUC proceeding, decision likely by June 2006).

California PUC Water Action Plan, December 15, 2005;available at www.cpuc.ca.gov

Cal Am Water, general rate case application for Los Angles, 2006, A-06-01-005, available at www.calamwater.com.

LADWP, "Water Rates," June 1, 1995, Ordinance Nos. 170435, etc., available at www.ladwp.com.

Great Oaks Water Company, Advice letter No. 173-W-1, October 31, 2005.

California PUC D. 9406033, which adopted a partial decoupling mechanism for Cal American.

"Actions to Improve the Efficiency of Water Use in California…" Report to Governor and Legislature, December 2005, available at www.cuwcc.org.